



*“Utilities need spectrum services –  
Are we missing the point?”*

*Wednesday 17<sup>th</sup> November 2010*

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“I am concerned that you don’t have a good understanding of our radio technology and would like to clear up any confusion you might have.”

“Our product is software defined radio that works in any frequency from 40 MHz to 958 MHz.”

“It is a single radio platform that can tune to any channel in this range with channel sizes from **200 kHz to 5 MHz in width.**”

**Who remembers ...**

**PMR in 20 kHz?**

**MPT1327 in 12.5kHz?**

**dPMR in 6.25kHz?**

**Linear modulation in 5kHz?**



# Where are bandwidth requirements leading?

25 kHz  
per voice  
channel

6.25 kHz  
per voice  
channel

## SERVICES

mobile data

point to multi-point  
data

(SCADA)

non-line of sight  
and near line of  
sight

indoor coverage

Data channel  
bandwidth  
12.5 kHz

Data channel  
bandwidth  
25kHz  
50kHz  
200kHz  
5MHz

# Where are the users coming from?

2002 application by Gas industry to join Airwave:  
3500 operational staff in UK



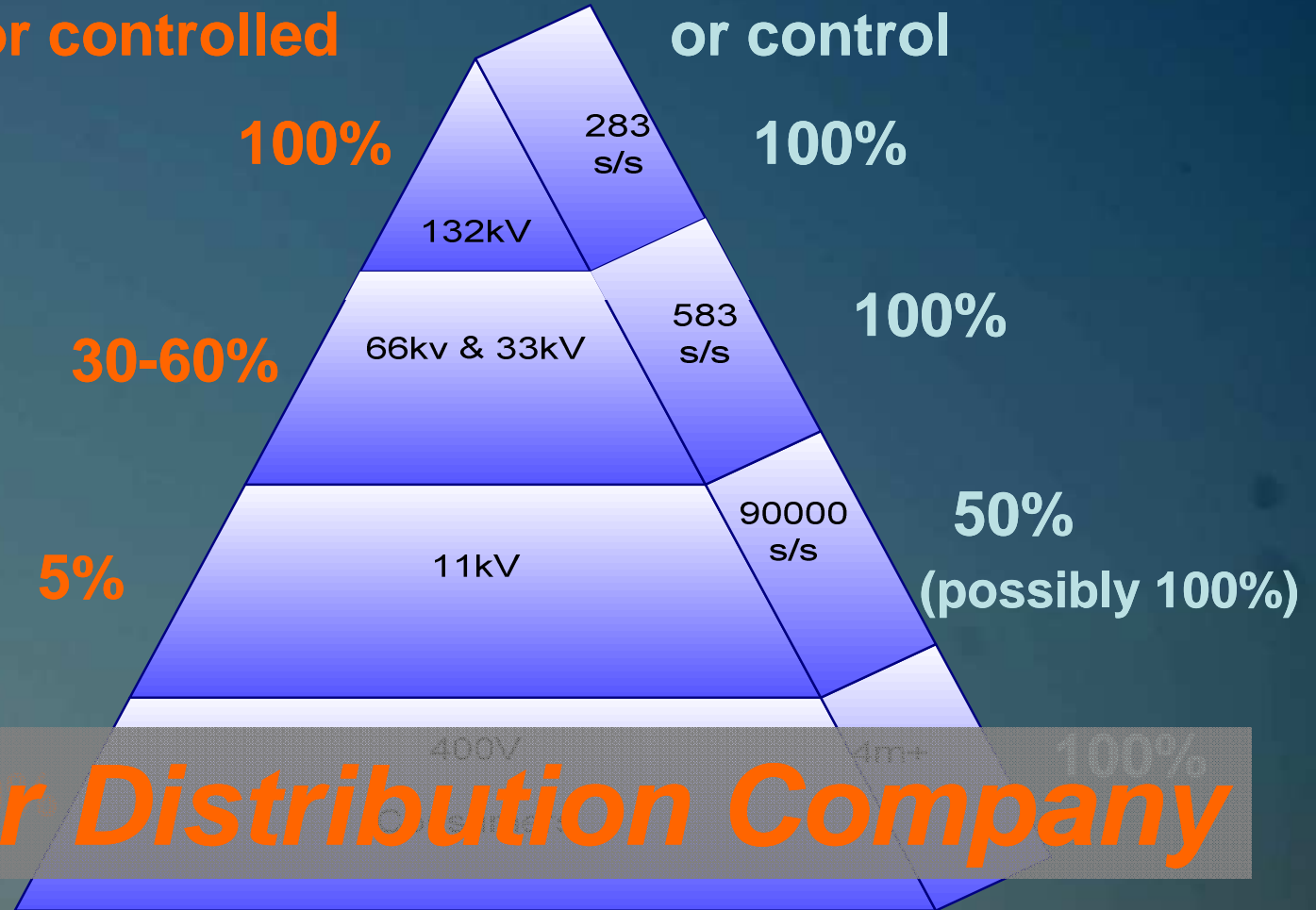
2004 application by Electricity industry to join  
Airwave: 7000 operational staff in UK



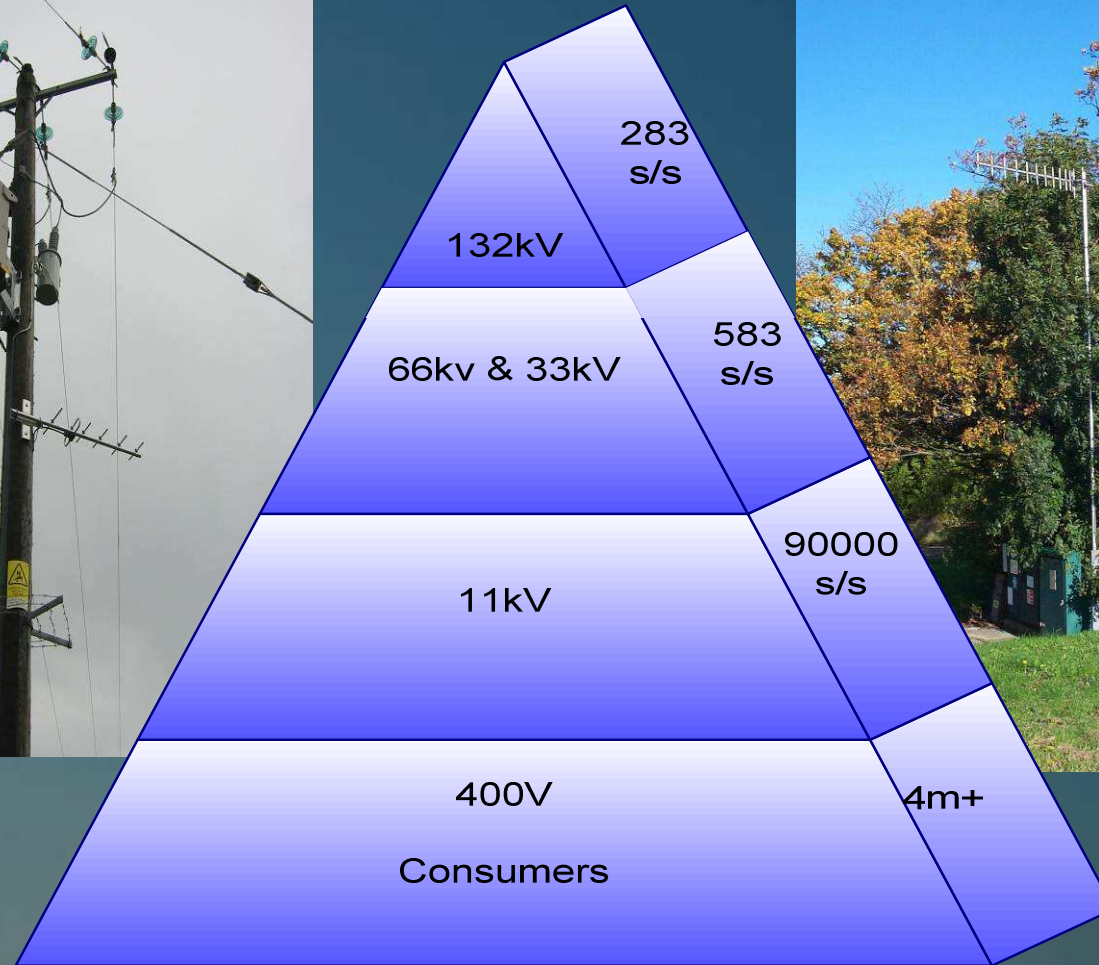
# Where are the users coming from?

currently monitored or controlled

target for monitoring or control



# Where are the users coming from?



“Utilities need spectrum services – Are we missing the point?” Barcelo Hotel, Daventry 17 November 2010

*“Utilities need spectrum services –  
Are we missing the point?”*

- If commercial networks and deregulated spectrum don't meet your operational requirements (eg for power resilience or area coverage); where does the spectrum come for a private wideband data network?
- What as an industry are we doing about private data networks for machine-to-machine communications – have we abandoned this market to GPRS and WiFi?

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